A paper was read, entitled, "Experiments on the Length of the Seconds' Pendulum; made at the Royal Observatory at Greenwich." By Captain Edward Sabine, of the Royal Regiment of Artillery, F.R.S.

The experiments described in this paper were made with the original convertible pendulum constructed by Capt. Kater, and employed by the author in Portland Place, in the year 1817; except that the tail pieces were removed, and the moveable weight dispensed with: and they were made on the vacuum apparatus established in the south-west angle of the Pendulum-room, the place assigned for it by the Astronomer Royal. Having had reason to suspect that the retardation of the vibrations of the pendulum performed in circular arcs, when the weight was above, was greater than that assigned by the formula commonly employed, the author first investigates the correction necessary to be applied from this cause. He next ascertains the reduction to a vacuum for the small residue of air which the apparatus still contained, or for the small portion which may have introduced itself by leakage. The alteration of rate for each degree of Fahrenheit is then determined to be 0.441, a quantity almost exactly the same as that which was deduced from a former inquiry. The result of the present inquiry is, that the vibrations of Captain Kater's pendulum, which at 57° were found to be 86069.1 are at 62°, 86066.9. At this latter temperature, the length of the seconds pendulum, in vacuo, would be 39.13734 inches. Tabular details of the experiments accompany the paper.

A paper was read, "On recrossed Vision; being the Description of a distinct Tribe of ocular Phenomena, supplementary to a Rationale of the Laws of cerebral Vision, recently published." By John Fearn, Esq. Communicated by Captain John Grover, F.R.S.

The phenomena described in this paper, and which the author designates those of *recrossed vision*, are cases in which objects placed between and very near the eye, such as the two sides of the nose, appear on opposite sides of the sphere of vision: the object on the right side of the nose being seen to the left by the right eye, and that which is on the left of the nose being seen to the right by the left eye. These and other phenomena illustrative of the well-known law by which we estimate the position of objects with relation to the eye to be in a line drawn from its image in the retina through the centre of the eye, are considered by the author as requiring further explanation. Not satisfied with the theory of Berkeley, that the mind is guided by the perceptions received from the sense of touch, in interpreting the signs furnished us by the sight, the author proposes to explain these phenomena by an hypothesis of his own, which he states in the following words. "Over and above the gift of two external or cranial eyes, man has been by his adorable Creator endowed with an internal cerebral organ, which performs the office of a *third eye*, by being the common recipient of impressions propagated either from one, or both of the external eyes; and the mind, in her chamber of percipience, steers with regard to ex-